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ABSTRACT

Point Loma Nazarene College in San Diego, California, provides special academic support for a small group of its provisionally admitted students through its Program Quick Start, a collaborative, cross-disciplinary project involving the fields of literature and biology. Students meet for up to 5 or 6 hours daily for 5 weeks during the summer as they take a composition course and a biology and bioethics course. Fairly extensive social interaction exists between the professors and the students. The first year of the program involved 14 students of disparate skill and motivation levels. The students were excited about learning. The second year, with only seven students, had a similar learning dynamic. The collaboration between a writing course and a biology course lent itself to a synergistic interaction. The learning atmosphere was also enhanced by the fact that one of the two courses had a hands-on lab experience connected to it. Both at the end of the program and 1 year later, students had extremely positive comments about the program. The program also had a pronounced effect on both grade point average and retention. Enforcing required study hours has been difficult, and the transition from the program into the regular freshman year is of concern. It is the program developers' conviction that a program such as Quick Start can help some of these at-risk students begin the journey towards a life of learning and scholarship. (RS)

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Symposium Title
Collaboration Pays Off: An Advance [Biology-Writing] Program For At-Risk College Freshmen Teaches A Few Lessons To The Students, Faculty, And The Institution

National Reading Conference, San Diego
Area IX: Policy Issues

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Paper One
The Dream, The Proposal, The First Two Years Of The Program

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Paper Two
The Collaboration Of Two Professors From Two Disparate Disciplines: What It Has Taught Us

Philip David Bowles
Associate Professor of English
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Paper Three
What The Institution Has Learned Thus Far

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The Dream, the Proposal, the First Two Years of the Program

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Saturday, December 3, 1994

1. The Dream

As has been indicated, Point Loma Nazarene College accepts students from widely disparate academic backgrounds. It would not be unusual to have a class in which a student with an SAT score of 1350 and a high school GPA of 4.0 is sitting across the aisle from someone who scored 650 on the SAT with a high school GPA of 2.0. The diversity in the classroom serves as an almost insurmountable challenge for the professor trying to successfully stimulate both groups of students.

My first experience with this challenge came six years ago when I taught a general education course for the first time. Prior to this, I had worked exclusively with biology majors in upper level courses: a group that consisted primarily of motivated and talented individuals, many of whom were on their way to medical school. Suddenly I was confronted with the task of simultaneously challenging and exciting my best students, without hopelessly losing the unmotivated student or the student with poor learning skills. This turned out to be the biggest teaching challenge of my career. The situation was exacerbated further by the fact that it had to be done in a class of one hundred students.

I did my best to generate the interest of the unmotivated learner and to make myself available to students with poor learning skills, but the fact is that I decided that the real needs of these groups were not being addressed in my classroom. I became convinced that development of learning skills and changing the unmotivated could not be effectively accomplished in a large classroom situation of the type I was experiencing. I became convinced that as a college, we were accepting a group of students who desperately needed personal attention if they were to succeed, and as a faculty member I was not able to give that to them. (I might add that we, like most colleges and universities have a learning skills lab, but I am of the opinion that learning skills are best developed in the context of particular courses.)

That is one aspect of the background as to how Program Quick Start came into being at Point Loma Nazarene College. The other aspect is the way in which the program brought together two professors of such disparate disciplines as Literature and Biology. Because of my interest and concern for the struggling student, I accepted an <u>ad hoc</u> committee position to evaluate the freshman year. I served on this committee with Phil Bowles who had worked extensively with freshmen and had concerns similar to my own. It was in the context of this responsibility that the two of us attended a conference. Phil had long been interested in the idea of a collaborative cross-disciplinary learning project and it was out of the dynamics of attending that meeting that the idea of a joint project for the "at risk" student was germinated.

2. The Proposal

The rationale was simple. We would work as a team with a small group of students, none of whom would be academic stars. We would provide them with student tutors who would live with them in the dorm and assist them during required study hours. The program would be carried out in the summer prior to the freshman year, over a five week time span. It would consist of two classes, the lab science course, Human Biology and Bioethics (4 units) and Composition (3 units). The courses are regular college general education courses and thus students can complete the program with seven semester units towards graduation.

The students would be in the classroom or lab with one, or both of us, in a small group context (less than 20) for up to five to six hours per day. In addition there would be fairly extensive social interaction between professors and students. This would include visits to our homes and a camping trip to encourage their development into a true learning community. We believed that one of the greatest barriers to the success of these students in their freshman year was a lack of accountability in the large classroom setting. In contrast, by starting them out in a small summer program with constant attention, we felt that there could be complete accountability.

The choice of courses was dictated naturally, by the expertise of the two of us, Biology and Composition. However these two disciplines are ideally suited for a collaborative learning experience - since the learning of Biology, especially its social implications, is ideally suited to a writing emphasis. The two courses could almost become one course and these struggling students would benefit from the synergism that would come partly from melding together two disciplines and partly from the collaboration of two professor working together for a common goal within a single small group of students.

3.The First Two Years

A. The Learning Environment

In the first year of the program we had 14 students. As mentioned above, one of the primary goals was to reduce the disparity in student ability. By bringing "at risk" students into a single group we thought we could accomplish that. It is true that the disparity was reduced, but it was fascinating to see how much diversity there still was within this group. We had several students who although gifted in traditional literacy and logic, had not applied themselves in the classroom. We also had motivated students who were unskilled and unpracticed in academic routines. Finally we had several students who had neither skills nor the motivation to acquire those skills. We soon discovered that this mix is an extremely important component to a successful program. The most important ingredient in my opinion is the gifted, but heretofore unmotivated student. In a small group setting like this

- with a high level of accountability, it is not difficult to generate motivation. Thus the natural ability of these students provide the spark which helps to ignite the group as a whole.

Student performance on the first Biology quiz of the program illustrates this point. The most gifted student in the class had been identified clearly the first day. He asked the most probing questions, and while others stumbled with difficult chemical concepts, he grasped them quickly. However this individual had a history of not applying himself. Thus since he did not study for the first quiz, he got one of the lowest grades. He was furious at himself for his irresponsibility, especially in light of his having been outdone by individuals with SAT scores that totalled less than half of what his were. The dynamic of the classroom, together with his respect for the faculty to whom he was already beginning to feel personally accountable, spurred him on and kept him motivated for the rest of the course. Indeed, his presence together with two or three other gifted, but previously unmotivated, students, helped to turn the entire class into a stimulated group of learners.

There was another student in that classroom who was not gifted with academic skills but was gifted with social skills. She also did poorly on one of the first quizzes. Like the bright student who did not study, her performance just reinforced her negative view of herself. "I am just dumb," she said loud enough that we professors could hear her. Fortunately, this personable young woman had already become part a tightly woven support group that was focused in large part on the academic success of its members. As a result she did not give up; indeed it seemed that she was routinely bolstered by those around her and she eventually completed the program successfully.

In my five previous years, I had never seen the students with poor academic records excited about learning, but this group almost considered learning fun. The basis of it was the small-classroom-dynamic, where they were not in the background. For the first time in their academic lives they were the focus of classroom interaction; learning was the primary goal and there was social pressure to succeed at it.

The second year was much the same from the perspective of the learning dynamic. That year the group was smaller, too small, with only seven students. However again we had several key students who kept the focus at a fairly high level.

Learning of course, is very much a social experience. Still for me today, my favorite place to learn is not in the library by myself, it is at a scientific meeting - with electricity in the air as the latest discoveries are announced. It has always been that way for me and I believe it is that way for our students as well. Thus the single most important ingredient in our program has been the social dynamic. Both years the highlight of the trip has turned out to be our trip to Catalina Island, located off the coast about twenty to thirty miles. Here we snorkel, kayak, sit around the campfire, and

enjoy meals with our students. We do this two weeks into the program and the experience is extremely important in the students' bonding process, with each other, as well as with us, the faculty and tutorial staff. The character and dynamic of each of the two groups of students that we have worked with over the past two summers have been very different from one another. Indeed in the second year there were some unfortunate social episodes that resulted in some permanent divisiveness. Nevertheless the bonding that took place within the sub-groups and with the faculty was just as strong that year as it was the previous year.

The net result of the program is that by the halfway point, the students are a unit --- or at least an intricate part of some sub-group. There has been no exception to this. Each of the twenty-one students over the first two years has had a firm social support system.

B. The Collaboration

The collaboration between a Writing course and a Biology course lends itself we believe, to a synergistic interaction. The course includes for example, a discussion of ethical issues that result from recent developments in biomedical technology. We have had discussions on issues such as <u>in vitro</u> fertilization and surrogacy. The students are arranged into teams to debate these issues. They come to take their personal convictions very seriously, and the fact that they are thinking about and debating the issue in Biology lends passion to the issue when it comes time to write about it. They are writing about something that has become very important to them. This is further enhanced by the fact that a single group of individuals who are eating together, studying together and living together are focusing together as a unit on a single issue.

Another example of successful synergism is illustrated by our discussion of evolution. Since our college has a number of students from very conservative religious backgrounds, the students are often very surprised at the overwhelming scientific evidence in favor of evolution. The biological portion of the course explores this in some detail. This is also fertile ground for writing and for a while the students become consumed by this topic - in a manner that would never occur if it took place in a single isolated course in a lecture theater that they attended for three one hour periods per week. It is refreshing to see students who normally would be sitting in the back rows of a large classroom becoming engrossed in academic issues.

The learning atmosphere is also enhanced by the fact that one of the two courses had a hands-on lab experience connected to it. In a program as concentrated as this one, with the students typically working on academic matters ten to twelve hours a day, the physical exercises associated with lab-learning provide a change of pace that is welcomed and probably needed. Since many of the lab exercises require a written lab report, there is further opportunity to integrate their maturing writing skills with their

scientific experiences.

C. Assessment

The impact of the program has been analyzed in part by a questionnaire that the students were given as they left the program and again as they looked back on it one year later. The detailed responses to the survey both quantitative as well as all qualitative comments are available to interested individuals upon request. However only brief comment of the results of those studies will be made here. For example, in answer to the question "How well did PQS help in the development of your writing and communication skills necessary for success in college work?" three of the fourteen students from the 1993 class said the program had been a major boost to my development, five said that it had been very helpful, five said that it had been moderately helpful, one said that it had been somewhat helpful, and none said that it had not been helpful at all. The responses were similar when the same question was asked of students one year later. The survey as a whole had thirteen questions exploring different aspects of the program. The narrative comments indicated that the students had extremely positive feelings about the program as it drew to a completion in each of the two years. A year later, we were favorably impressed by the comments of Quick Start alumni. Again the entire set of comments are available upon request. The comments emphasize the social nature of the learning experience. Here is a sample of the comments one year later:

> "PQS was a small group. We became a family, much like the roommates I have had."
>
> "I felt as if I was a part of a large family in PQS, now its easy to get lost in the crowd."
>
> "I never felt very comfortable during the year at PLNC. PQS was home to me."

The big question of course is whether the program had an impact on the students academic performance. We have followed the group from the first year and find that PQS had a pronounced effect on both GPA and retention. The mean GPA of PQS students for the first year was 1.97, compared to 1.29 for provisionally admitted students who did not go through the program. During the first summer fourteen students enrolled in the program. One unmotivated student was advised not to return. The other thirteen enrolled in the fall of 1993. Ten of these students have now enrolled for the fall of 1994, a retention rate of 76.9 percent. In contrast, only nineteen of the 43 provisional students who did not go through PQS, returned for the fall of 1994, a retention rate of 44.1 percent. Thus the retention rate was 74 percent higher for students who enrolled in PQS. The GPA was 53 percent higher.

D. The Future Challenge

Although seeing a greater than fifty per cent increase in grades and an even greater improvement in retention is encouraging, we do not consider raising the mean GPA to 1.97 to be a particularly noteworthy achievement. Indeed we would point out that there have been many challenges that have yet to be overcome. We have used student assistants who have served as the tutors ~~in addition to the~~ dorm assistants. We chose students who have excelled in our courses to serve this supervisory capacity; they have all been honors students. We had hoped that they would serve as models of inspiration, and indeed they have. Nevertheless, they are only a couple of years older than the students enrolled in the program, and they are faced with the challenging task of enforcing our two and a half hours of required study each evening. We find that "at risk" students are noteworthy for their procrastination. Settling into study at a prescribed time requires a level of self-discipline that most of these students are not accustomed to. Once they start to study in earnest, they may well continue into the early morning hours, the problem however is getting them started. If we allow them to procrastinate, then we reinforce their poor habits. Thus it is essential to us that required study hours be enforced. Our student assistants tell us that this has been their biggest challenge. We have not yet demonstrated a successful solution to this dilemma, which is exacerbated by using student assistant who, almost by definition, are not particularly strong authority figures. In the future, we will probably need to make forceful statements at the beginning that tie continued participation to the program (and admission to the fall semester) to a disciplined approach to the supervised study schedule.

Our second major concern has been the transition from the Quick Start program into the regular freshman year. The students cease all formal connection to the program in five weeks, and although we try to keep contact with them, our role in their academic lives diminishes. Once the program is over the synergism that had been brought about by the group dynamics is gone as well, although they continue their friendships with one another. Five weeks is a very short time and in spite of the remarkable enhancement in retention and grades it is still not clear whether old habits can be changed in any major way through a five week program. We may find that in the future that it will be necessary to keep the students in a common set of courses through the fall semester. The impact of the program is also weakened by the fact that students often end up in courses that are not nearly as demanding as the two PQS courses have been. In the program we tried to get the students used to the idea that academic success is all-consuming. Ironically they along with non-PQS provisional students are then placed into courses and programs where the average student survives with less than all-consuming effort. Since the pressure is off, some of the students quickly revert to their old practices. The future fine-tuning of the program may have to include, our putting these students into courses that we know are challenging and keeping these students together with continued supervised study for one more semester.

Indeed, for the program to be truly successful, the summer instructors would need to conduct regular motivational session once per week (perhaps in part by using visiting speakers).

We have hesitated to keep the students together in the fall, in part because of the stigma of being associated with what is sometimes considered a remedial program. As the students enter the program, they feel as though they are second class students and one of our most important tasks is to make them feel as though they are first class. Nevertheless even in the fall, they feel somewhat embarrassed about having been in Quick Start. Our other reason for hesitating to keep them together in the fall is that one of our most important goals is to assimilate the students into the student body-at-large. We have been concerned that if they are still together in their own set of courses in the fall, they will not tie into the institution as a whole. Nevertheless the advantages of keeping them challenged and closely monitoring their progress may well justify delaying the complete assimilation process for one semester.

As we find ways to work through these major challenges, we will be able to successfully introduce incoming "at risk" students to the satisfaction, joy, and fulfillment that come from the cultivation of an inquisitive mind. Indeed it is our conviction that a program such as ours can help some of these students begin the journey towards a life of learning and scholarship.